Arizona Air National Guard (AANG) 162nd Project Area
(Part of the TIAA CERCLA Site)

Boundaries:

The AANG project area is located in Area B of the Tucson International Airport Area (TIAA) site. The property is located on the north-central side of the Tucson International Airport and is bounded on the north by Valencia Road, and on the west, south, and east by the Tucson International Airport.

Site History:

- Since 1956, the AANG 162nd Tactical Fighter Group base has been used to train fighter pilots from throughout the United States and other countries. Operations also include aircraft and vehicle maintenance and fueling.

- These activities resulted in the release of hazardous wastes into the soil and groundwater leading to contamination of the upper zone of the regional aquifer.

- The TIAA site was placed on the National Priorities List (NPL) in 1983.

- In June 1995, a remedial investigation (RI), which characterized the extent and concentration of contaminants in the soil and groundwater at the AANG, was completed. Of the eight sites investigated, only Site 5 required active remediation of soil and groundwater. From 1959 to 1985, Site 5 included a wash rack area that was used for the engine shop and aircraft maintenance shops.

- In November 1995, a feasibility study (FS) for Site 5 soils was completed. In February 1996, a remedial design was completed.

- In August 1996, a record of decision (ROD) for the soils at AANG Site 5 was completed by the Air National Guard. The ROD specified that soil vapor extraction (SVE) (with activated carbon treatment for air emissions) would be used to treat trichloroethene (TCE) contamination in the Site 5 soils.

- An SVE system was started in April 1996 and operated until November 1997. During this time, the system removed approximately 64 pounds of volatile organic compounds (VOCs) and reduced the concentration of VOCs in the soil to below the cleanup goal of less than 200 micrograms per liter (ug/l). At this level, groundwater would no longer be impacted.

- Pursuant to EPA's 1988 regional groundwater ROD, a groundwater pump and treat system for Site 5 was built in 1997. This system extracts contaminated groundwater and treats it with air stripping before reinjecting the treated water into shallow (vadose zone) wells.

- In October 1998, the soils at Site 5 were closed.

Site Status:

- The base has been in operation since 1956 in training functions for various tactical fighter aircraft. The U.S. Air Force is the lead agency at this TIAA project area, with ADEQ and EPA providing regulatory and technical oversight of remedial response actions.

- The groundwater pump and treat system at AANG Site 5 pumps approximately 110 gallons per minute (gpm) from 11 extraction wells in the upper (eight wells) and lower subunits (three wells) of the upper zone of the regional aquifer.

- Observed influent TCE concentrations at the treatment plant have recently been in the five to six parts per billion (ppb) range, and effluent has been non-detect.

- Since the groundwater treatment system began operation, a total of approximately 304 million gallons of groundwater have been treated, and approximately 19.5 pounds of VOCs have been removed.

- AANG is currently analyzing groundwater data from the site and a large surrounding area. This effort is aimed at analyzing the capture area of the pump and treat system to ensure that contaminants are not migrating off site. Three additional groundwater monitoring wells are planned for the western edge of the base.

- EPA and ADEQ have completed an RI report that identifies the AANG as a source for groundwater contamination at West Plume B. A record of decision (ROD) for West Plume B is planned for September 2003.

- The AANG is working on a five-year review of their groundwater remediation system to determine if any modifications or improvements are needed.

Site Hydrogeology:

- The vadose zone at the AANG project area extends from the surface to a depth of approximately 88 feet below ground surface (bgs) and is composed of silty sands, caliche deposits, and gravelly sands.

- The upper zone of the regional aquifer in the AANG project area consists of two subunits and a middle aquitard. All of the known groundwater contamination at the AANG project area are found in these subunits.

- The upper subunit consists of well-graded, gravelly, course sand and is found at a depth of approximately 88 to 103 feet bgs. Near Site 5 the upper subunit is generally silt-free.

- The middle aquitard separates the upper and lower subunits and is composed of tight sandy silt with scattered pebbles. At Site 5, the middle aquitard lies at a depth of about 103 to 128 feet bgs.

- At Site 5, the lower subunit is found at a depth of approximately 128 to 138 feet bgs and is composed of primarily of course-grained sand. There is also a northwest-southeast trending sand channel in the lower subunit along the south-central portion of the AANG base.

- The groundwater flow direction in the upper and lower subunits is toward the northwest, and the depth to groundwater is approximately 90 feet bgs.

- More detailed descriptions of the hydrogeology of the AANG project area can be found in reports and studies available at the TIAA Information Repository.

Contaminants:

The current contaminants of concern in groundwater include volatile organic compounds (VOCs), mainly trichloroethene (TCE). TCE concentrations range from non-detect to about ten ppb. Contaminants of concern at the site may change as new data become available.

Public Health Impact:

All municipal wells in the area that were contaminated with TCE have been shut down. Most of the domestic wells have either been shut down or converted to irrigation wells. However, a few residents with domestic wells with low levels of TCE and 1,4-dioxane have chosen to continue using their wells.

Community Involvement Activities:

The unified community advisory board (UCAB) conducts public meetings to discuss the site the third Wednesday of every other month (starting in January).

Information Repository:

Interested parties can review site information at the information repository at the TCE Superfund Information Library located at 101 W. Irvington Road, within the El Pueblo Branch Library in Tucson, (520) 791-4733. Site information is also available at both ADEQ's Southern Regional Office located at 400 W. Congress, Suite 433 in Tucson, and the main office located at 1110 West Washington Street, Phoenix. Files are available for review Monday through Friday from 8 a.m. to 5 p.m. Please call (520) 770-3361 to arrange a file review appointment at the Southern Regional Office or the ADEQ Records Center (602) 771-4378 or (800) 234-5677 (Arizona toll-free).

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*In Arizona, but outside the Tucson area, call toll-free at (888) 271-9302.
**Call EPA's toll-free message line at (800) 231-3075.